Subject 24.242. Logic II. Sample problems from the first homework, due February 26

1. Write down a bounded formula whose extension is the set of triples $\langle x, y, z\rangle$ such that $x, y$, and $z$ are positive integers and $z$ is a common divisor of $x$ and $y$.
2. Define, for $F$, a finite set of natural numbers, $\operatorname{Code}(F)$ to be $\sum_{x \in F} 2 \mathrm{E} x$, so that $F$ is the set of places in the binary decimal expansion of $\operatorname{Code}(F)$ where 1 s appear. Give the Arabic numeral for Code( $\{2,4,6,8\}$ ).
